

## Alternative Energy by Leeor Harel

Have you ever wondered what the earth would be like if it wasn't warming up? Alternative energy is a big topic to talk about. Solar and wind energy are both alternative energies that can help make the earth a less hot place. In Marlborough, wind energy would be the best to use. Now, let's see why we even need to start using alternative energy in the first place.

Why do we need to start using alternative energy? First, there is an over-load of carbon dioxide, CO<sub>2</sub>, which causes global warming. The carbon dioxide in the air gets trapped because more is released into the atmosphere by burning fossil fuels than what the atmosphere can get out. This happens with other greenhouse gases, too. With less CO<sub>2</sub> put into the air we can reduce the heating of the atmosphere. Also, this would be better for our health. The air is so hot it holds in pollution in some places, causing extreme health issues like asthma and other problems. Finally, people can also save money on gas and electricity if they "go green" and use fossil fuels less.

One of the most common alternative energy sources is solar energy. Solar energy is energy from the sun, whether you get that electricity and light from solar panels (the most common way) or other ways. Speaking of other ways, the Current Science Magazine did an article: "Plastic Bottles Light Homes" and the article explains how poor people in the Philippines used the sun to light bulbs in the huts of the very poor. An inventor from MIT thought of the idea to fill an old plastic bottle with water and a little bleach. The sun will then stream through the bottle and create light, with absolutely no cost! Another cool invention involving solar energy is a portable generator that runs on the sun power. It is also efficient because it emits no fumes and is noise free! But cool inventions like these don't only involve solar energy, but also wind energy.

Have you ever seen a wind turbine? Those turbines help make energy from the wind, which is another common alternative energy. Wind energy is when you use special machines known as turbines to make energy out of it. Speaking of turbines, New Scientist Magazine did an article about new designs for the "wings" of the turbines. Believe it or not, the coolness and efficiency comes from dinosaur inspired turbines! That's both cool and earth saving at the same

time. Another reason why wind energy is so useful and helpful is because it is renewable (which means never runs out). Boys Quest Magazine did an article about how that is so important. They said that it was important because we can continue to have a lot of this energy forever, and it is not harmful to the earth at all.

Out of the two alternative energies, wind energy would be the best for the city of Marlborough. Marlborough's climate tends to be really windy, and we also get much rain, snow, and thunder storms which bring a lot of wind, too. In the year 2011, Marlborough had an average wind speed of 37 mph, and around 100 windy days (days with over 10mph of wind). This speed and frequency is really good for turbines, and you can make a lot of energy out of it. Also, Marlborough gets a lot of wind because Marlborough is at a higher elevation, and places with a higher elevation tend to get lots of wind. Also, you could say that Marlborough is somewhat close to the Atlantic Ocean, which also brings in a lot of wind. These are some of the reasons that wind energy can be good for the town of Marlborough.

These were only a few reasons and cool inventions about how and why solar and wind energy are very good alternative energies and why any alternative energy in general is important to start using. The best alternative energy for Marlborough to use would be wind energy, according to statistics. Help save earth from an over load of carbon dioxide and other greenhouse gases! GO GREEN!

SOURCES!

<http://search.ebscohost.com/>

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<http://environment.nationalgeographic.com/environment/global-warming/wind-power-profile/>

<http://www.weatherbase.com/weather/city.php3?c=US&s=MA&refer=&statename=Massachusetts-United-States-of-America>